1
00:00:15,509 --> 00:00:12,950
greetings from mission control houston

2
00:00:18,550 --> 00:00:15,519
and welcome to space station live

3
00:00:19,990 --> 00:00:18,560
it's tuesday september 10 2013. you're

4
00:00:21,590 --> 00:00:20,000
joining us here inside of the

5
00:00:23,670 --> 00:00:21,600
international space station flight

6
00:00:25,990 --> 00:00:23,680
control room the johnson space center in

7
00:00:28,310 --> 00:00:26,000
houston texas

8
00:00:29,990 --> 00:00:28,320
right now the orbit 2 team currently on

9
00:00:32,470 --> 00:00:30,000
console watching the systems and the

10
00:00:33,990 --> 00:00:32,480
crew of the international space station

11
00:00:35,590 --> 00:00:34,000
right now they're being led by flight

12
00:00:37,590 --> 00:00:35,600
director mike lammers there on your

13
00:00:39,670 --> 00:00:37,600

right and then right next to him seated

14
00:00:42,150 --> 00:00:39,680
at the capcom position

15
00:00:43,670 --> 00:00:42,160
is lucia mccullough serving as the voice

16
00:00:45,670 --> 00:00:43,680
communication link between all of our

17
00:00:47,910 --> 00:00:45,680
teams down here on the ground and the

18
00:00:49,350 --> 00:00:47,920
astronauts up in space

19
00:00:52,549 --> 00:00:49,360
and those astronauts the crew of

20
00:00:55,430 --> 00:00:52,559
expedition 36 in their final day

21
00:00:58,630 --> 00:00:55,440
as expedition 36 soon to be expedition

22
00:01:01,910 --> 00:00:58,640
37 when three of those crew members

23
00:01:03,990 --> 00:01:01,920
prepare to depart later this evening

24
00:01:06,149 --> 00:01:04,000
the three leaving nasa astronaut chris

25
00:01:08,469 --> 00:01:06,159
cassidy and russian cosmonauts pavel

26
00:01:10,070 --> 00:01:08,479
vinogradov and alexander misurkin are

27
00:01:12,630 --> 00:01:10,080
scheduled to depart the international

28
00:01:14,789 --> 00:01:12,640
space station later tonight

29
00:01:16,469 --> 00:01:14,799
as they bring an end to a little under

30
00:01:19,030 --> 00:01:16,479
six months on board the international

31
00:01:21,670 --> 00:01:19,040
space station uh the three remaining on

32
00:01:23,990 --> 00:01:21,680
board nasa astronaut karen nyberg uh

33
00:01:26,310 --> 00:01:24,000
russian cosmonaut fjordy yurchikhin and

34
00:01:29,270 --> 00:01:26,320
european astronaut luca parmitano will

35
00:01:30,630 --> 00:01:29,280
formally become expedition 37

36
00:01:32,149 --> 00:01:30,640
with the russian cosmonaut florida

37
00:01:34,870 --> 00:01:32,159
yurchikhin taking

38
00:01:37,030 --> 00:01:34,880

the role of commander which he

39
00:01:39,429 --> 00:01:37,040
received from pavel vinogradov yesterday

40
00:01:40,950 --> 00:01:39,439
in a change of command ceremony

41
00:01:42,950 --> 00:01:40,960
but again three of those astronauts

42
00:01:45,030 --> 00:01:42,960
spending much of their day readying for

43
00:01:47,749 --> 00:01:45,040
that departure

44
00:01:50,310 --> 00:01:47,759
departing commander pavel vinogradov

45
00:01:52,789 --> 00:01:50,320
now designated flight engineer one since

46
00:01:54,630 --> 00:01:52,799
passing the reigns of command over

47
00:01:56,870 --> 00:01:54,640
is in charge of preparing the soyuz

48
00:01:58,709 --> 00:01:56,880
vehicle for its final descent

49
00:02:01,030 --> 00:01:58,719
getting all the final items packed on

50
00:02:03,030 --> 00:02:01,040
board and preparing its systems while

51
00:02:05,190 --> 00:02:03,040
working in concert with russian flight

52
00:02:07,590 --> 00:02:05,200
controllers the russian mission control

53
00:02:08,790 --> 00:02:07,600
center and koryov

54
00:02:10,550 --> 00:02:08,800
aside from

55
00:02:12,470 --> 00:02:10,560
finishing up all that packing he'll be

56
00:02:15,589 --> 00:02:12,480
doing some photography of the external

57
00:02:17,670 --> 00:02:15,599
surface of the soyuz's hatch between it

58
00:02:19,670 --> 00:02:17,680
and the international space station

59
00:02:22,229 --> 00:02:19,680
again vinogradov will be the commander

60
00:02:24,229 --> 00:02:22,239
of that vehicle during its descent with

61
00:02:29,670 --> 00:02:24,239
undocking scheduled to take place later

62
00:02:33,990 --> 00:02:31,830
joining him on the soyuz will be

63
00:02:35,350 --> 00:02:34,000

alexander misurkin a fellow russian

64
00:02:38,390 --> 00:02:35,360
cosmonaut

65
00:02:40,470 --> 00:02:38,400
he's spending a few hours today getting

66
00:02:42,309 --> 00:02:40,480
all of the experiment samples a small

67
00:02:45,110 --> 00:02:42,319
contingent of which will be brought back

68
00:02:46,150 --> 00:02:45,120
and the soyuz's limited cargo capacity

69
00:02:48,229 --> 00:02:46,160
space

70
00:02:50,949 --> 00:02:48,239
among those is the russian cascade

71
00:02:53,309 --> 00:02:50,959
bioreactor which looks to develop new

72
00:02:55,110 --> 00:02:53,319
technology to prove produce

73
00:02:57,990 --> 00:02:55,120
microorganisms with an increased

74
00:02:58,710 --> 00:02:58,000
resistance to some of the common factors

75
00:03:01,430 --> 00:02:58,720
of

76
00:03:04,790 --> 00:03:01,440
biological preparation storage and use

77
00:03:06,869 --> 00:03:04,800
such as freezing and drying aside from

78
00:03:08,949 --> 00:03:06,879
that he'll also be the board engineer or

79
00:03:11,830 --> 00:03:08,959
the second in command basically

80
00:03:14,070 --> 00:03:11,840
vinogradov's backup on that soyuz craft

81
00:03:16,550 --> 00:03:14,080
and the third member of the departing

82
00:03:19,190 --> 00:03:16,560
vehicle nasa astronaut chris cassidy

83
00:03:20,390 --> 00:03:19,200
again bringing an end to his second

84
00:03:21,190 --> 00:03:20,400
space flight

85
00:03:23,990 --> 00:03:21,200
uh

86
00:03:25,670 --> 00:03:24,000
cassidy will have logged a total of 182

87
00:03:27,270 --> 00:03:25,680
days in space now

88
00:03:29,270 --> 00:03:27,280

he'll be spending most of his day

89
00:03:31,589 --> 00:03:29,280
preparing for that descent getting all

90
00:03:35,509 --> 00:03:31,599
of his items in order and then finally

91
00:03:38,869 --> 00:03:37,190
donning his suit and getting ready to

92
00:03:40,470 --> 00:03:38,879
depart

93
00:03:42,390 --> 00:03:40,480
remaining on board the international

94
00:03:43,990 --> 00:03:42,400
space station new commander fiorder

95
00:03:46,229 --> 00:03:44,000
yurchikhin

96
00:03:47,750 --> 00:03:46,239
who took command of the station

97
00:03:50,550 --> 00:03:47,760
yesterday afternoon after the

98
00:03:53,190 --> 00:03:50,560
traditional change of command ceremony

99
00:03:55,910 --> 00:03:53,200
he's on he's been tasked with drying out

100
00:03:58,710 --> 00:03:55,920
the russian orlan eva suits after

101
00:04:02,470 --> 00:04:00,390
undergoing some scheduled maintenance

102
00:04:03,670 --> 00:04:02,480
following some successful spacewalks

103
00:04:05,270 --> 00:04:03,680
over the summer

104
00:04:07,990 --> 00:04:05,280
and he'll also be in charge of

105
00:04:09,910 --> 00:04:08,000
monitoring the soyuz as it uh descends

106
00:04:11,750 --> 00:04:09,920
through the earth's atmosphere

107
00:04:13,750 --> 00:04:11,760
maintaining contact with the crew from

108
00:04:15,509 --> 00:04:13,760
the international space station also

109
00:04:17,270 --> 00:04:15,519
setting up and activating the device

110
00:04:19,349 --> 00:04:17,280
that allows the station to receive

111
00:04:21,590 --> 00:04:19,359
telemetry from that vehicle during its

112
00:04:23,510 --> 00:04:21,600
descent

113
00:04:26,790 --> 00:04:23,520

remaining on board with him will be

114
00:04:28,790 --> 00:04:26,800
european astronaut luca parmitano

115
00:04:30,390 --> 00:04:28,800
on the docket for him today is uh

116
00:04:31,909 --> 00:04:30,400
continuing some work that he began

117
00:04:34,230 --> 00:04:31,919
yesterday preparing the station's

118
00:04:36,070 --> 00:04:34,240
combustion integrated rack for some

119
00:04:38,230 --> 00:04:36,080
upcoming experiment work he'll be

120
00:04:40,469 --> 00:04:38,240
installing some alignment guides uh

121
00:04:42,710 --> 00:04:40,479
which help isolate it from

122
00:04:43,990 --> 00:04:42,720
some of the

123
00:04:45,909 --> 00:04:44,000
vibration environment of the

124
00:04:47,350 --> 00:04:45,919
international space station that

125
00:04:50,230 --> 00:04:47,360
combustion integrated rack the only

126
00:04:52,150 --> 00:04:50,240
combustion research facility on board uh

127
00:04:54,390 --> 00:04:52,160
he'll also be transferring some

128
00:04:55,670 --> 00:04:54,400
experiment samples over to the soyuz for

129
00:04:57,830 --> 00:04:55,680
return

130
00:05:00,550 --> 00:04:57,840
mainly from the immuno experiment which

131
00:05:02,230 --> 00:05:00,560
looks to study the immune responses in

132
00:05:03,749 --> 00:05:02,240
humans during their long-duration space

133
00:05:06,469 --> 00:05:03,759
flights

134
00:05:08,390 --> 00:05:06,479
this study hoping to provide a very

135
00:05:10,390 --> 00:05:08,400
fundamental understanding

136
00:05:11,830 --> 00:05:10,400
of the process so scientists on the

137
00:05:15,189 --> 00:05:11,840
ground can develop better

138
00:05:16,550 --> 00:05:15,199

pharmacological tools to counter

139
00:05:17,990 --> 00:05:16,560
any unwanted

140
00:05:20,790 --> 00:05:18,000
immune side effects of these

141
00:05:23,110 --> 00:05:20,800
long-duration space flights

142
00:05:25,350 --> 00:05:23,120
then our final crew member on board nasa

143
00:05:26,950 --> 00:05:25,360
astronaut karen nyberg is spending much

144
00:05:28,469 --> 00:05:26,960
of her day inside of the japanese

145
00:05:30,070 --> 00:05:28,479
experiment module

146
00:05:33,350 --> 00:05:30,080
right now she's been

147
00:05:35,830 --> 00:05:33,360
inspecting the ice crystal 2

148
00:05:37,590 --> 00:05:35,840
experiment some of the samples which are

149
00:05:40,070 --> 00:05:37,600
currently located in the solution

150
00:05:42,310 --> 00:05:40,080
crystallization observation facility

151
00:05:44,550 --> 00:05:42,320
iraq inside the japanese segment which

152
00:05:47,350 --> 00:05:44,560
allows investigations of crystal growth

153
00:05:48,710 --> 00:05:47,360
and microgravity she's also doing some

154
00:05:51,029 --> 00:05:48,720
final

155
00:05:52,550 --> 00:05:51,039
preparation work for the upcoming cygnus

156
00:05:54,230 --> 00:05:52,560
vehicle which will be launching to the

157
00:05:56,550 --> 00:05:54,240
international space station next week

158
00:05:59,110 --> 00:05:56,560
and its first demo flight delivering

159
00:06:01,430 --> 00:05:59,120
cargo on behalf of the orbital sciences

160
00:06:02,309 --> 00:06:01,440
corporation fulfilling their

161
00:06:04,550 --> 00:06:02,319
final

162
00:06:06,950 --> 00:06:04,560
milestones in the commercial orbital

163
00:06:08,710 --> 00:06:06,960

transportation services contract and

164
00:06:09,909 --> 00:06:08,720
bringing a second commercial provider

165
00:06:11,830 --> 00:06:09,919
online

166
00:06:14,469 --> 00:06:11,840
to resupplying the international space

167
00:06:16,550 --> 00:06:14,479
station but for now all

168
00:06:19,350 --> 00:06:16,560
eyes focused on that landing later

169
00:06:21,670 --> 00:06:19,360
tonight again undocking scheduled at 6

170
00:06:23,350 --> 00:06:21,680
35 pm central time

171
00:06:25,510 --> 00:06:23,360
the crew will depart and we'll be

172
00:06:28,550 --> 00:06:25,520
bringing you live coverage throughout

173
00:06:31,670 --> 00:06:28,560
deorbit burn still targeted at 905 pm

174
00:06:34,390 --> 00:06:31,680
central with an eventual landing at 9 58